

Appl. No. 10/696,812
Examiner: James M Hewitt, Art Unit 3679
In response to the Office Action dated March 23, 2006

Date: June 23, 2006
Attorney Docket No. 10111396

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (previously presented): An inflatable product, including:

a first chamber;

an air pump;

a first valve through which the air pump inflates and deflates the first chamber;

a first switch structure, connected to the first valve, wherein the first valve is mechanically opened by the first switch structure;

a second chamber;

a second valve through which the air pump inflates and deflates the second chamber;

a second switch structure, connected to the second valve, wherein the second valve is mechanically opened by the second switch structure;

a first pair of electrodes and a second pair of electrodes, the air pump operating in a first direction for inflating air through the first or second valve when the first pair of electrodes contact each other, the air pump operating in a second reverse direction opposite to the first direction for deflating air through the first or second valve when the second pair of electrodes contacts each other,

wherein the first switch structure and the second switch structure operate the pump by controlling the first pair of electrodes and the second pair of electrodes.

Claim 2 (currently amended): The inflatable product as claimed in claim 1, further including a slider connected to the first and second pairs of electrodes and provided beside the first and second switch structures in such a way that the air pump is activated by the first switch structure and the second switch structure via the slider.

Claim 3 (currently amended): The inflatable product as claimed in claim 2, wherein the first and second switch structures comprise a first ear and a second ear respectively, and the first pair of electrodes are brought into contact when the first switch structure is in a first orientation, and the

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second pair of electrodes are brought into contact with each other when the second switch structure is in a second orientation, and the first and second ear are arranged such that when the second switch structure is in the second orientation, the second ear is impelled by the slider when the first ear pushes against the slider such that the second switch structure is moved out of the second orientation.

Claim 4 (previously presented): An inflatable product, including:

a first chamber;

an air pump;

a first valve through which the air pump inflates the first chamber;

a first switch structure, connected to the first valve, wherein the first valve is mechanically opened by the first switch structure;

a second chamber;

a second valve through which the air pump inflates the second chamber;

a second switch structure, connected to the second valve, wherein the second valve is mechanically opened by the second switch structure;

wherein the air pump has a fan and motor for inflating air through the first or second valve;

wherein the first switch structure and second switch structure control the pump to operate.

Claim 5 (currently amended): The inflatable product as claimed in claim 4, wherein the motor rotates the fan in a first direction to pump air from the outside to the inside of the first or second chamber or ~~rotating~~ rotates the fan in a second direction opposite to the first direction to pump air from the inside to the outside of the first or second chamber.

Claim 6 (previously presented): The inflatable product as claimed in claim 4, further including a first pair of electrodes and a second pair of electrodes, the air pump operating in a first direction for inflating air through the first or second valve when the first pair of electrodes contact each other, the air pump operating in a second reverse direction opposite to the first direction for deflating air through the first or second valve when the second pair of electrodes contact each

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other, wherein the first switch structure and the second switch structure operates the pump by controlling the first pair of electrodes and the second pair of electrodes.

Claim 7 (currently amended): The inflatable product as claimed in claim 6, further including a driven element connected to the first and second pairs of electrodes and provided beside the first and second switch structures in such a way that the air pump is activated by the first switch and the second switch structures via the driven element.

Claim 8 (previously presented): The inflatable product as claimed in claim 7, wherein the driven element is a slider.

Claim 9 (currently amended): The inflatable product as claimed in claim 8, wherein when the first switch structure is in an inflate orientation, the first switch structure is impelled by the slider out of the inflate orientation to an off-orientation when the second switch structure is moved to a deflate orientation.

Claim 10 (currently amended): The inflatable product as claimed in claim 8, wherein the first and second switch structures comprise ~~comprises~~ a first ear and a second ear respectively, and the first pair of electrodes are brought into contact when the first switch structure is in an inflation orientation, and the second pair of electrodes are brought into contact with each other when the second switch structure is in a deflation orientation, and the first and second ear are arranged such that when the second switch structure is in the deflation orientation, the second ear is impelled by the slider when the first ear pushes against the slider such that the second switch structure is moved out of the deflation orientation.

Claim 11 (currently amended): An inflatable product comprising:

- a pack having a first vent opened and closed by a first valve, a second vent opened and closed by a second valve, and a third vent in communication with the ambient;

- a first chamber in communication with the first vent;

- a second chamber in communication with the second vent;

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an air pump pumping air into the pack through the third vent when activated in a first direction, and out of the pack through the third vent when activated in a second direction;

a first switch structure movable between a first orientation and a second orientation, the first orientation opening the first valve and activating the air pump in the first direction to inflate the first chamber, and the second orientation closing the first valve;

a second switch structure movable between a third orientation and a fourth orientation, the third orientation opening the second valve and activating the air pump in the second direction to deflate the second chamber, and the fourth orientation closing the second valve;
and

a driving element impelling the second switch structure out of the third orientation to the fourth orientation when the first switch structure is moved to the first orientation while the second switch structure is in the third orientation, such that the first and second switch structures cannot be respectively in the first and third orientations simultaneously.

Claim 12 (currently amended): The inflatable product recited in claim 11, wherein the driving element impels the first switch structure out of the first orientation to the second orientation when the second switch structure is moved to the third orientation while the first switch structure is in the first orientation, such that the first and second switch structures cannot be respectively in the first and third orientations simultaneously.

Claim 13 (currently amended): The inflatable product recited in claim 12, wherein:

the first switch structure is further movable to a fifth orientation, the fifth orientation opening the first valve and activating the air pump in the second direction to deflate the first chamber; and

the second switch structure is further movable to a sixth orientation, the sixth orientation opening the second valve and activating the air pump in the first direction to inflate the second chamber.

Claim 14 (currently amended): The inflatable product recited in claim 13, wherein the driving element impels the second switch structure out of the sixth orientation to the fourth orientation when the first switch structure is moved to the fifth orientation while the second switch structure

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is in the sixth orientation, such that the first and second switch structures cannot be respectively in the fifth and sixth orientations simultaneously.

Claim 15 (currently amended): The inflatable product recited in claim 14, wherein the driving element impels the first switch out of the fifth orientation ~~structure to the second orientation~~ when the second switch structure is moved to the sixth orientation while the first switch structure is in the fifth orientation, such that the first and second switch structures cannot be respectively in the fifth and sixth orientations simultaneously.

Claim 16 (previously presented): The inflatable product recited in claim 11, further comprising a first and second pair of electrodes, the first pair of electrodes in contact when the first switch structure is in the first orientation to activate the pump in the first direction, and the second pair of electrodes in contact when the second switch structure is in the third orientation to activate the pump in the second direction.

Claim 17 (previously presented): The inflatable product recited in claim 16, wherein the driving element comprises a slider, the first switch structure comprises a first ear, and the second switch structure comprises a second ear, wherein the first ear impels the slider to a first position bringing the first pair of electrodes into contact when the first switch structure is moved to the first orientation, and the second ear impels the slider to a second position bringing the second pair of electrodes into contact when the second switch structure is moved to the third orientation.

Claim 18 (currently amended): The inflatable product recited in claim 17, wherein the slider impels the second ear to move the second switch structure out of the third orientation ~~to the fourth orientation~~ when the first switch structure is moved to the first orientation while the second switch structure is in the third orientation.

Claim 19 (currently amended): The inflatable product recited in claim 18, wherein the slider impels the first ear to move the first switch structure out of the first orientation ~~to the second~~

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~~orientation~~ when the second switch structure is moved to the third orientation while the first switch structure is in the first orientation.

Claim 20 (previously presented): The inflatable product recited in claim 11, wherein the first switch structure is mechanically connected to the first valve and the second switch structure is mechanically connected to the second valve.

Claim 21 (currently amended): An inflatable product, including:

- a first chamber;

- a motor and fan assembly;

- a first valve through which the motor and fan assembly inflates the first chamber;

- a first switch structure, connected to the first valve, wherein the first valve is mechanically opened by the first switch structure;

- a second chamber;

- a second valve through which the motor and fan assembly inflates the second chamber;

- a second switch structure, connected to the second valve, wherein the second valve is mechanically opened by the second switch structure;

wherein the first switch structure and second switch structure control the motor to operate.

Claim 22 (currently amended): An inflatable product, including:

- a first chamber;

- an air pump;

- a first valve through which the air pump inflates the first chamber;

- a first switch structure, connected to the first valve, wherein the first valve is mechanically opened by the first switch structure;

- a second chamber;

- a second valve through which the air pump inflates the second chamber;

- a second switch structure, connected to the second valve, wherein the second valve is mechanically opened by the second switch structure;

wherein the air pump has a fan and motor for inflating air through the first or second valve;

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~~wherein the first switch structure and second switch structure control the air pump to operate and open the first or second valve in one step.~~

wherein the first switch structure controls the air pump to operate and opens the first valve in one step, and the second switch structure controls the air pump to operate and opens the second valve in one step.

Claim 23 (new): The inflatable product recited in claim 13, further comprising a first and second pair of electrodes, the first pair of electrodes in contact when the first switch structure is in the first orientation and when the second switch structure is in the sixth orientation to activate the pump in the first direction, and the second pair of electrodes in contact when the first switch structure is in the fifth orientation and when the second switch structure is in the third orientation to activate the pump in the second direction.

Claim 24 (new): The inflatable product recited in claim 23, wherein the driving element comprises a slider, the first switch structure comprises a first ear, and the second switch structure comprises a second ear, wherein the first ear impels the slider to a first position bringing the first pair of electrodes into contact when the first switch structure is moved to the first orientation and when the second switch structure is moved to the sixth orientation, and the second ear impels the slider to a second position bringing the second pair of electrodes into contact when the first switch structure is moved to the fifth orientation and when the second switch structure is moved to the third orientation.